A NEW GENUS OF AMORBINI (HETEROPTERA: COREIDAE) FROM AUSTRALIA, WITH TWO NEW SPECIES

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A new genus (*Kurrajongia*) containing two new species (*K. armata* and *K. aploa*) in the tribe Amorbini (Coreidae) is described. Both species feed on *Brachychiton* spp. (Sterculiaceae) in eastern Australia. Dorsal view illustrations of adults and nymphs and drawings of the male and female genitalia are provided, as well as a key and biological notes. ☐ *Hemiptera, Coreidae, Amorbini, Brachychiton.*

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The tribe Amorbini (Hemiptera: Heteroptera: Coreidae) has 6 described genera in the Australian region: *Acroelytron* Mayr (1 species), *Amorbus* Dallas (15 species), *Cneius* Stal (1 species), *Gelonus* Stal (1 species), *Kurnaina* Distant (1 species), and *Tambourina* Distant (1 species).

This paper describes a new genus of Amorbini with two new species, both of which are associated with the common Kurrajong trees (*Brachychiton populneus* and *B. diversifolius*) in eastern Australia. They are moderately large (15-20mm) bugs with a speckled greyish appearance which occur in large clusters on the trunks of the trees. However, due to their camouflaged appearance they have been virtually overlooked by collectors until recent years when their host tree became known.

The following abbreviations are used for institutions where specimens are located: ANIC = Australian National Insect Collection, Canberra; AM = Australian Museum, Sydney; DPIQ = Department of Primary Industries, Indooroopilly, Brisbane; IBUNAM = Instituto de Biología (Colección Entomológica), Universidad Nacional Autónoma de México, Mexico City; QM = Queensland Museum, Brisbane; SAM = South Australian Museum, Adelaide; UQIC = University of Queensland Insect Collection, Brisbane. Abbreviations used in the label data lists: GBM = G.B. Monteith; SF = State Forest; NP = National Park. All measurements are given in mm.

Kurrajongia gen. nov.

ETYMOLOGY. For the common name of Kurrajong given to the host trees of both species included in the genus. Kurrajongs are familiar trees of inland eastern Australia.

TYPE SPECIES. *Kurrajongia armata* sp. nov. (Fig. 1).

DIAGNOSIS. The new genus resembles *Gelonus* Stål in having head and pronotum wider than long, tylus unarmed and extending anteriorly to the jugae, tibiae sulcate, and the abdominal sternite VII of the ♀ with plica and fissura. It also lacks the incrassate hind femora which are found in *Amorbus* but not in *Gelonus* (Steinbauer, 1995).

In *Kurrajongia* the rostrum reaches the metasternum, with rostral segment III longer than 1.30mm. The apex of the tylus reaches or extends beyond the antenniferous tubercles, the femora are unarmed, the eyes are large, slightly stylate and project beyond the lateral margins of the head. The pronotal calli are elevated and irregularly rounded at each side. In *Gelonus* the rostrum is shorter, reaching only on to the anterior part of the mesosternum, with rostral segment III shorter than 0.60mm. The tylus is short extending slightly beyond the antenniferous tubercles and the femora are armed. The eyes are hemispherical and not conspicuously projecting, with the calli almost flat.

DESCRIPTION. *Head.* Width across eyes greater than length, non declivent, pentagonal, produced beyond antenniferous tubercles and dorsally flat; tylus laterally compressed and projecting upward as an acute projection; jugae unarmed, apically subglobose and shorter than tylus; antenniferous tubercles prominent, obliquely truncate, unarmed; antennal segment I robust, thickest, slightly curved outwards and longer than head; segments II and III terete and robust; segment IV fusiform; antennal segment II the longest, segment III the shortest; ocelli raised on low tubercles; preocellar pits deep; postocellar pits deep or slightly excavated; eyes large,

slightly stylate, hemispherical, projecting conspicuously beyond lateral margins of the head; postocular tubercle relatively small; bucculae elongate, angulate anteriorly, not extending beyond middle third of eyes, with external edge sinuate or entirely rounded; rostrum at least to anterior edge of metasternum and sometimes a little further; rostral segments I and IV subequal, segments II and III subequal and slightly shorter than I and IV; mandibular plate absent; frons with deep central longitudinal incision.

Thorax. Pronotum trapeziform, clearly or slightly wider than long, moderately declivent; collar wide; frontal angles produced forward as medium to broad, short projections; anterior margin entire; anterolateral margins almost straight or slightly concave, with short and subacute spines or nodules; humeral angles rounded or acute and produced into a short, laterally directed, conical tooth; posterolateral edge straight or sinuate; posterior edge straight; callus elevated, irregularly rounded at each side, divided along midline by a longitudinal furrow and ending on a deep almost circular central depression; disc striate and densely tuberculate. Anterior lobe of metathoracic peritreme elevated and auriculiform, posterior lobe sharp, small; propleura, mesopleura, and metapleura densely tuberculate; mesosternum with median sulcus, flanked by two elevated ridges.

Legs. Fore coxal cavities slightly opened, middle cavity wide and conspicuously opened, and hind cavity open; femora unarmed, densely tuberculate; tibiae terete, sulcate.

Scutellum. Triangular, length equal to or slightly greater than width; anterior third elevated, with anterior margin and posterior third flat; apex subacute; disc and apex densely tuberculate; anterior margin and anterolateral areas striate and polished black.

Hemelytra. Macropterous, almost reaching the apex of the last abdominal segment; costal margin emarginate; apical margin clearly sinuate with inner third concave and outer third straight; apical angle obtuse; hemelytral membrane elongate with several longitudinal veins, few of them bifurcate.

Abdomen. Connexival segments reflexed above margin of hemelytron at rest; posterior angles of connexival segments simple, not spinose; abdominal sterna with weak medial depression, extending to middle third of sternite V.

Female genitalia. Abdominal sternite VII with plica and fissura; plica narrow, rectangular, with outer margin straight to slightly concave; gonocoxae I conspicuously enlarged dorso-ventrally, larger than paratergite IX, in caudal view closed, in lateral view slightly convex; paratergite VIII triangular, with spiracle visible; paratergite IX square, larger than paratergite VIII. Spermatheca: Fig. 2A.

Male genitalia. Genital capsule: Posteroventral margin emarginate (Fig. 2B, E), with edge rounded and slightly excavated on the midline. Parameres: Inner margin of the basal portion of the body with a lobe projecting anteriorly; inner margin of the middle third of the body flattened, extending anteriorly, and sometimes reaching the basal lobe; distal portion hook-like (Fig. 2C-D, F-G).

Integument. Body surface rather dull, with long or short, decumbent to suberect, golden or silvery, bristle-like hairs. Head, pronotum, scutellum, clavus, corium, connexival segments, thorax, femora, tibiae, and abdominal sterna densely tuberculate; pronotum and scutellum irregularly striate.

KEY TO SPECIES OF *KURRAJONGIA* GEN. NOV.

1. Humeral angles of the pronotum produced into an angulate tooth; pronotum clearly wider than long; second antennal segment with an apical, white ring; third antennal segment with no more than apical half pale; basal two segments of hind tarsus white, contrasting with very dark apical segment; parameres as in Fig. 2F-G
   ..... *K. armata* sp.nov.

   Humeral angles of the pronotum rounded; pronotum with length about equalling width; second antennal segment without white apex; third antennal segment with more than apical half pale; basal two segments of hind tarsus not contrastingly pale; parameres as in Fig. 2C-D.
   ..... *K. aploa* sp.nov.

Kurrajongia armata sp. nov. (Figs 1, 2E-G, 4A, 6)

ETYMOLOGY. Named for the angular projections of the humeral angles of pronotum.

MATERIAL. HOLOTYPE: QMT46015 ♂, Braemar SF via Kogan (Qld), 15-19.x.1979, G.B. Monteith, in QM. PARATYPES (nymphs (N) listed are not types) (Qld): 2♀♀, same data as holotype, in QM; 4♂♂3♀♀, same locality, 4.iv.1996, on *B. populneum*, GBM, in QM; 1♀, 40km S of The Lynd, 13.ix.1982, GBM, in IBUNAM; 12♂♂9♀♀5N, Burnett R., 3km W Eidsvold, 14.iv.1996, on *B. populneum*, GBM, in QM; 39♂♂30♀♀1N, Mt Moffatt NP, Rotary Shelter Shed, 27.ii.1996, on *B. populneum*, GBM, in QM, ANIC, SAM; 2♀♀, Mt Moffat NP, Kenniff's Lookout,

13.xii.1987, GBM, Thompson & Yeates, in IBUNAM & UQIC; 3♀♀1N, Mt Moffatt NP, Mt Rugged Summit, 27.ii.1996, on *B. populneum trilobus*, GBM & C.J. Burwell, in QM; 1♂1♀2N, Cracow, 13.iv.1996, on *B. populneum*, GBM, in QM; 1♀, 34km N of Taroom, 20.ix.1997, GBM, on *B. populneum*, in QM; 4♂♂1♀, 'The Amphitheatre', Expedition Ra NP, 24-26.ix.1997, D. & L.Cook, on *B.populneum trilobus*; 1♂1♀3N, 25km N Monto, 10.iv.1996, on *B. populneum*, GBM, in QM; 6♂♂1♀1N, Binjour Plateau, via Gayndah, 14.iv.1996, on *B. populneum*, GBM, in QM; 1♂, 50km W Eidsvold, 14.iv.1996, on *B. populneum*, GBM, in QM; 1♀, 5km S Bogantungun, 12.iv.1996, on *B. populneum*, GBM, in QM; 2N, Auburn River NP, via Mundubbera, 17-19.iv.1987, on *B. populneum*, GBM, in QM; 3♂♂1N, 2ml WNW Beta, 30.iv.1957, Key & Chinnick, in ANIC; 2♂♂1♀, Chinchilla, 14.xi.1988, D. Bunting, in DPIQ and IBUNAM; 1♀, 'Allinga', Chinchilla, 17.v.1984, G. Lithgow, in QM; 1♀, Chinchilla town, 16.ii.1984 , G. Lithgow, in QM. (QM Paratypes: QMT46016-46049, 46051-46074, 46076-46128, 46133-46138).

DIAGNOSIS. *Kurrajongia armata* is easily distinguished from the only other species in the genus by its shorter, broader form and the characters given in the key. The parameres (Fig. 2F-G) are also distinct.

DESCRIPTION. MALE. *Colouration.* Dorsal: pale orange yellow with tubercles orange hazel; following areas black to dark red brown: sides of head in front of eyes, ocellar tubercle, two longitudinal bands running laterad of midline on the anterior and middle third of pronotal disc, two large spots on the posterior margin of pronotal disc, basal angle, anterior margin (except midline) and lateral margins of the anterior third of scutellum, irregular spots scattered on clavus and corium, and a square spot on the midline of connexival segments III to VII; apex of scutellum pale yellow; hemelytral membrane dirty ambarine, with veins, basal angle and some discoidal or irregular spotting dark brown; abdominal segments bright orange yellow, with most of VII black; antennal segments I and II with ventral side black, and dorsal side red brown with irregular spotting yellow; apical one tenth of II yellow;segment III with basal three fifths black, and distal two fifths yellow; segment IV dark red brown with basal yellow ring. Ventral: Pale orange yellow with tubercles bright red brown to bright orange hazel; following areas black: apex of rostral segment IV, area around the metathoracic peritreme, anterolateral margins and spines of the thoracic pleura, most of mesosternum, scattered spots on abdominal sterna III to VII, and genital capsule and middle third of pleural sterna III to VII; coxae hazel brown with external margin pale yellow; trochanters pale yellow with some ventral hazel brown spots; femur pale yellow with tubercles red brown, and two black irregular rings, one subbasal, the other subdistal; tibiae pale yellow, densely marked with red brown tubercles, with base and apex mostly black; hind tarsus segments I and II pale yellow and segment III dark hazel orange; anterior and posterior lobes of metathoracic peritreme, the area around each abdominal spiracle, and one or two discoidal or irregular spots on prothorax, mesothorax, and metathorax pale yellow to creamy yellow.

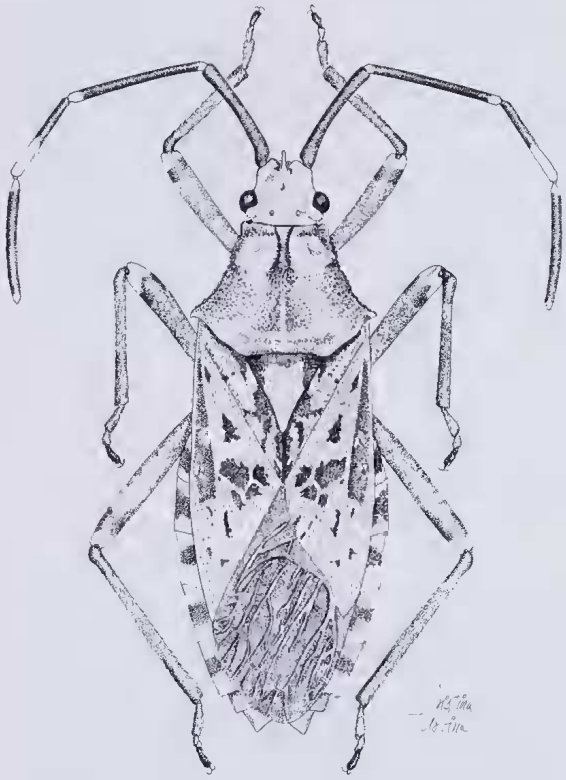

FIG. 1. Dorsal view of ♀ *Kurrajongia armata.*

Structure. Pronotum: Clearly wider than long; frontal angles produced forward as medium-sized projections; anterolateral margins emarginate, obliquely straight or slightly concave, with short and subacute spines; humeral angles acute, produced into laterally-directed, conical teeth; posterolateral edge sinuate.

Genital capsule. Posteroventral margin emarginate, with edge rounded, and slightly excavated on the midline (Fig. 2E). Parameres: Fig. 2F-G.

FEMALE. *Colouration.* Similar to ♂. Connexival segments VIII and IX black or red brown with

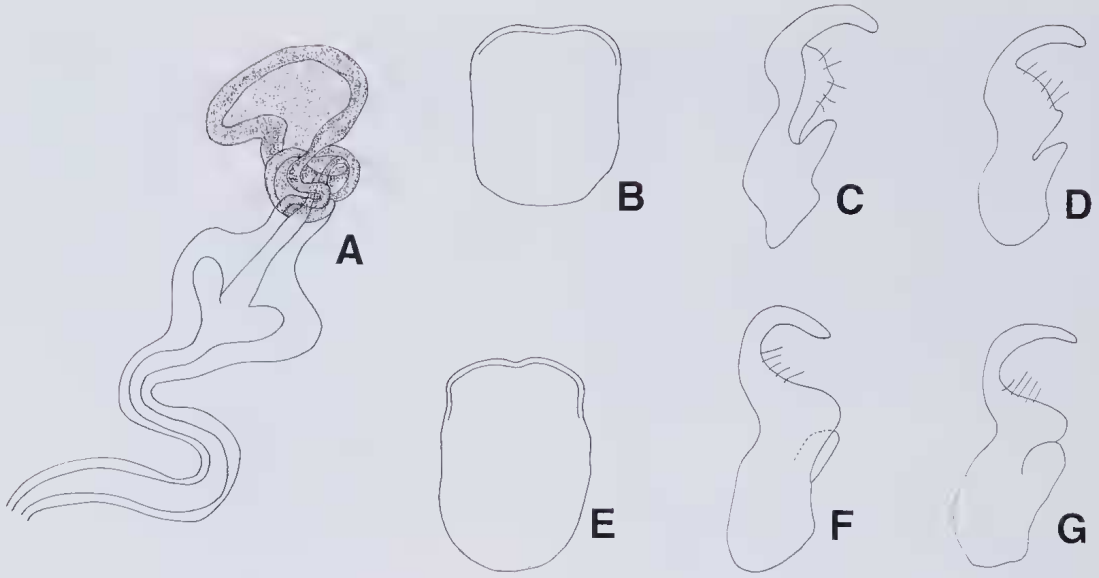

FIG. 2. A-D, *Kurrajongia aploa*; A, ♀ spermatheca; B, ♂ genital capsule; C-D, ♂ parameres. E-G, *Kurrajongia armata*; E, ♂ genital capsule; F-G, ♂ parameres.

posterior third orange yellow; dorsal segments VIII and IX black, with following areas dark orange yellow; longitudinal midline band, and lateral edges; genital plates pale orange yellow, with tubercles, and each edge of paratergite VIII and IX black to red brown. Variation: I, femora pale yellow, with tubercles and irregular spots red brown, and with only one black subdistal ring; 2, abdominal sternite VII with fissura mostly black.

Measurements (mm). ♂ first, then ♀. Head length: 1.80, 2.10; head width across eyes: 2.40, 2.62; interocular space: 1.35, 1.50; interocellar space: 0.47, 0.52; length antennal segments: I, 3.30, 3.40; II, 3.85, 3.95; III, 2.65, 2.80; IV, 3.40, 3.40; length rostral segments: I, 1.30, 1.60; II, 1.20, 1.30; III, 1.20, 1.40: IV, 1.40, 1.55. Pronotum: Total length: 3.10, 3.55; width across frontal angles: 2.05, 2.30; width across humeral angles: 4.35, 5.40. Scutellar length: 1.85, 2.20; width: 1 75, 2.20. Total body length: 14.00, 16.90.

DISTRIBUTION (Fig. 5). Widely distributed in central western Queensland from a little west of the Darling Downs, north almost 1200km to near The Lynd, SW of the Atherton Tableland. A sighting record by the second author is available for nymphs on Kurrajong trees at Granite Gorge, just W of Mareeba. This would extend the known range of the species another 250km further north but requires adults for confirmation.

Kurrajongia aploa sp. nov.
(Figs 2A-D, 3, 4B)

ETYMOLOGY. From aploos (Greek adjective meaning simple), refers to the lack of spines on the humeral angles of the pronotum.

MATERIAL. HOLOTYPE: QMT46014 ♂, Maidenwell (Qld), 18.iii.1996, on *Brachychiton populneus*, GBM, in QM. PARATYPES (nymphs listed are not types) (Qld): 2♀♀1N, same data as holotype, in QM; 1♂2♀♀, Bluff R. foothills, via Biggenden, 1-7.i.1972, H.Frauca, in ANIC; 2♀1N, Cooyar, 18.iii.1996, on *B. populneum*, GBM, in QM, SAM; 2♂♂3♀♀4N, Mistake Mtns via Cunninghams Gap, 10-12.iii.1978, 1000-1100m, on *B. populneum*, GBM and D. Booth, 1♂2♀♀4N in UQIC and 1♂1♀ in IBUNAM; 1♂1♀, Gayndah, Masters, in AM; 1♀, no data,, in DPIQ; 1♂, Brisbane, 4.x.1925, in IBUNAM; 1♀, Brisbane, 6.iii.1960, C.J. Paul, in QM; 1♂1♀, no data, in AM; 1N, Nundubbermere Falls, 25km SW Stanthorpe, 2-3.iv.1988, on *B. populneum*, GBM, in QM; 1♂, 6km N of Taroom, 2.iii.1991, G. Daniels, in UQIC; New South Wales: 6♂♂3♀♀,22km W of retreat (35km E of Manilla, 600m, 23.x.1995, Schuh & Cassis, in AM and QM; 1♂, Tenterfield, 3.i.1942, R. Pullen, in AM. (QM Paratypes: QMT46050, 46075, 46129-46132).

DIAGNOSIS. *Kurrajongia aploa* can be recognized by its more elongate form, the humeral angles which are rounded and not produced, and characters of the antennae and hind tarsi given in the key. The parameres (Fig. 2C-D) are also distinct.

DESCRIPTION. MALE. *Colouration.* Dorsal: Pale orange yellow with tubercles orange hazel; following areas black to dark red: sides of head in front of eyes, ocellar tubercle, preocellar pits, postocellar pits, lateral margins of vertex, two longitudinal bands running laterad of midline of the anterior and middle third of pronotal disc, basal angle, anterior margin (except midline), and lateral margin of the anterior third of scutellum, and irregular spots on clavus and corium; pronotal disc scattered with some creamy yellow spots; hemelytral membrane dirty ambarine, with veins, basal angle , and some discoidal or irregular spots dark brown; apex of scutellum yellow; connexival segments black with anterior angle and posterior margin yellow; abdominal segments bright orange yellow, with the greatest part of VII and lateral portion of VI black; antennal segments I and II, with ventral side black and dorsal side red brown with yellow marks; segment III yellow with basal third black; segment IV black to red brown, with narrow basal ring yellow. Ventral: Pale orange yellow with tubercles bright red brown to bright orange hazel; following areas black: apex of rostral segment IV, area around lobes of the metathoracic peritreme, anterolateral margins of the thoracic pleura, four discoidal spots on the anterior margin of abdominal sternite IV, and two on the sterna V and VI, and one row of discoidal spots near abdominal spiracles of sterna III to VII; anterior and posteror lobe of metathoracic peritreme, the area around each abdominal spiracle, and some discoidal or irregular spots on prothorax, mesothorax, and thoracic metapleura pale to creamy yellow; coxae and trochanters pale yellow, with some dark brown spots; femora dirty yellow, with tubercles and marks red brown, and with subdistal irregular black ring; tibiae dirty yellow, and densely covered by dark red brown spots; hind tarsal segments I and II hazel orange; segment III dark hazel orange.

Structure. Pronotum slightly wider than long; frontal angles produced forward as broad projection; anterolateral margins emarginate, almost straight, and nodulose; humeral angles rounded; posterolateral edge almost straight.

Genital capsule. Posteroventral margin conspicuosly emarginate, protruding, with edge rounded, and slightly excavated on the midline (Fig. 2B). Parameres: Fig. 2C-D.

FEMALE. *Colouration*; Similar to ♂. Connexival segments VIII and IX black to red brown; dorsal segments VIII and IX black, with following areas dirty orange yellow: longitudinal band at midline of segment IX, and lateral portions of each segment; genital plates pale orange yellow, with basal angle of gonocoxae I, external edge of paratergite IX, and small spot near the spiracle of paratergite VIII black.

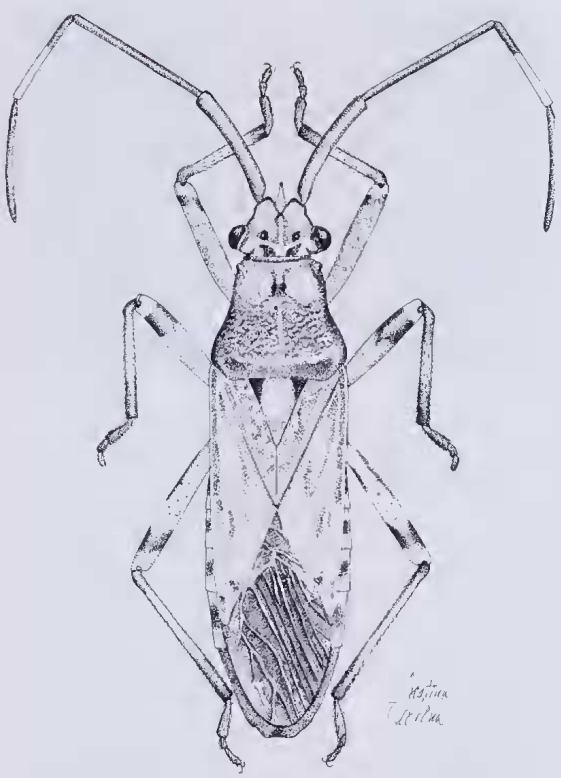

FIG. 3. Dorsal view of ♂ *Kurrajongia aploa.*

Measurements (mm). ♂ first, then ♀. Head length: 2.25, 2.55; width across eyes: 3.15, 3.25; interocular space: 1.75, 1.92; interocellar space: 0.57, 0.57; length antennal segments: I, 3.50, 3.85: II, 4.60, 4.85; III, 2.85, 3.20; IV, 3.40, 3 63; length rostral segments: I, 1.70, 2.00; II, 1.50, I,75; III, 1.40, 1.65; Iv, 1.70, 1.90. Pronotum: total length: 3.75, 4.50; width across frontal angles: 2.35, 2.70; width across humeral angles: 3.90, 5.00. Scutellar length: 2.00, 2.30; width: 1.70, 2.00. Total body length: 17.10, 20.40.

DISTRIBUTION (Fig. 5). This species is known from a series of localities, mostly at higher altitude, along the Dividing Range from Tenterfield in far northern New South Wales north to the Cooyar-Maidenwell district just north of Toowoomba in southern Queensland. Beyond that area there is one record 150km further north at lower elevations on the subcoastal ranges near Biggenden and another from 200km to the west

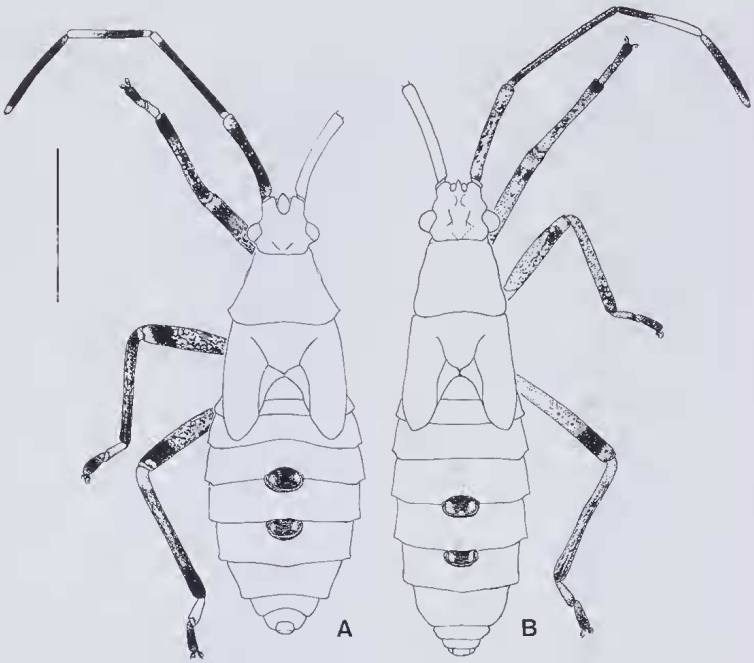

FIG. 4. Last instar nymphs of *Kurrajongia* spp. A, *K. armata*. B, *K. aploa*.

near Taroom. There are two early records from Brisbane which have not been repeated by recent collecting. Except for the Taroom locality the distribution of *K. aploa* is allopatric with respect to that of *K. armata* which is generally further inland.

HOST PLANTS OF *KURRAJONGIA* SPECIES

All host records for these bugs are from trees of *Brachychiton* Schott & Endl. (Sterculiaceae) which has been recently monographed by Guymer (1988). It includes trees commonly known as Bottle Trees and Kurrajongs. *Brachychiton* is considered to be one of the older endemic components of the Australian flora and has 31 species of which 30 occur in Australia and 2 in New Guinea. Within Australia they occur across the north and east of the continent with one species in the central deserts. Centres of diversity are in the Kimberley (9 spp) and in Cape York Peninsula (10 spp). However records of *Kurrajongia* are all from only two of the three non-deciduous species which form the Section *Poecilodermis* of *Brachychiton*. These are the familiar trees known as Kurrajongs and which are widely retained (or replanted) on farms in eastern Australia because of their value as drought relief fodder for stock. The species are the common Kurrajong, *B. populneus* (Schott & Endl.) R.Br. in Horsfield, and the northern Kurrajong, *B. diversifolius* R.Br. in Horsfield. Their distribution in eastern Australia and the records for *Kurrajongia* species are shown in Fig. 5. *B. populneus* is divided into two subspecies and the dotted line shows the approximate boundary between them based on information in Guymer (1988) and more recent herbarium records provided by that author. Almost all records for both species of *Kurrajongia* are from *B. populneus* but the two records from north Queensland (*K. armata* at The Lynd; presumed nymph of *K. armata* from Granite Gorge) are from within the range of the closely related *B. diversifolius*. In the south the two subspecies of *B. populneus* were not all differentiated at the time of collection of the bugs. However it appears that all records of *K. aploa* are from *B. populneus populneus* while *K. armata* occurs on both that subspecies and on *B. p. trilobus* Guymer. The single Taroom specimen of *K. aploa* is puzzling because there appears to be no Kurrajong trees at the locality. When the locality was revisited in Sept., 1997 the only *Brachychiton* found was the narrow leafed bottle tree, *Brachychiton rupestris* (Mitchell ex Lindley) Schumann but *Kurrajongia* was not found on that tree.

Although there is a diverse flora of *Brachychiton* species available in Australia, it is very curious that the two very distinct species of *Kurrajongia* which have arisen both feed on a very small taxonomic range of species. This may be an artefact of collecting because these bugs are very cryptic and require special search. However within the region of southern Queensland where the bugs are common on *B. populneus* there are at least five other *Brachychiton* species which have been examined by the second author without results. *Brachychiton* species in other areas may repay attention.

BIOLOGY OF *KURRAJONGIA* SPECIES

Both species are found on the trunks of the trees where they adopt a flattened posture against the rough bark which makes them very hard to see. A characteristic habit of both species, at least in late summer, is the formation of very large aggrega-

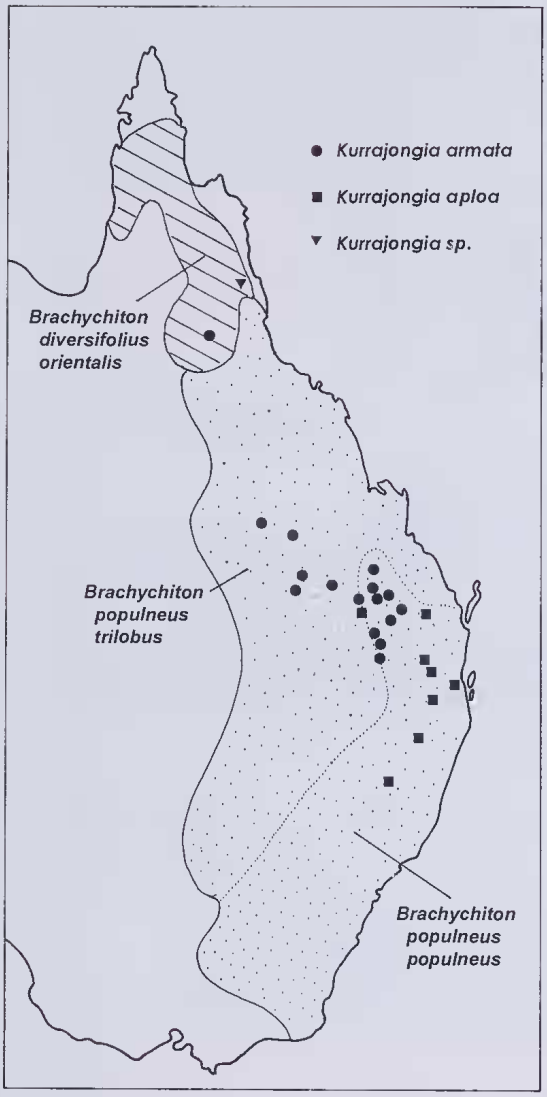

FIG. 5. Distribution map of *Kurrajongia* spp. and their *Brachychiton* food plants in eastern Australia.

tions of mixed adults and nymphs. These may number several hundred individuals and may measure 20cm in diameter. These aggregations form a quiescent patch on the trunk, often at about the level of the lower limbs of the tree. When disturbed they move en masse around the trunk and settle again. If disturbed vigorously they synchronously discharge their scent glands which provides a formidable group defence. *Kurrajongia armata* has only been taken on the main trunks of the trees but *K. aploa* individuals are occasionally found on the smaller branches and

FIG. 6. Living adult ♀ of *Kurrajongia armata* on foliage of *Brachychiton populneus*.

twigs where they adopt the same flattened posture lengthways on the twigs.

Egg laying has not been observed though a single old egg, presumed to be of *K. armata*, was found in a bark crevice adjacent to an aggregation of that species.

The nymphs are similarly coloured to the adults and have no aposematic colour or behaviour as seen, for example, in *Amorbus* nymphs.. Last instars of both species are shown in Fig.4. They can be separated by the same prothorax, antenna and tarsal features described in the key to adults.

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LITERATURE CITED

GUYMER, G.P. 1988. A taxonomic revision of *Brachychiton* (Sterculiaceae). Australian Systematic Botany 1: 199-323.

STÄL, C. 1865. Hemiptera Africana II. Stockholm: Norstedtiana: 1-200.

STEINBAUER, M. 1995. The biogeography and host plant utilisation of eucalypt feeding Coreidae (Hemiptera: Heteroptera). PhD thesis, University of Tasmania, Hobart.